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ABSTRACT

A study was undertaken (1) to determine if a relationship existed between preadolescents' levels of reading comprehension as defined by T. C. Barrett's Taxonomy of Reading Comprehension and their levels of moral development according to Lawrence Kohlberg's stage sequence and (2) to discover if females demonstrated higher levels of reading comprehension and moral reasoning than did males. One-hundred three seventh and eighth grade students were administered a reading comprehension test based on Barrett's Taxonomy, a mental ability test, and the Kohlberg Moral Judgment Interview. Because of time constraints, only 40 subjects participated orally in the Moral Judgment Interviews. The results revealed a significant positive relationship between subjects' scores on the reading comprehension measure and the test of mental ability, suggesting that students with higher academic ability were also able to comprehend reading material at a higher level. They also showed a low positive correlation between subjects' scores on the test of mental ability and the moral judgment interview, suggesting that the ability to make higher level judgments was partially dependent upon general academic ability. No significant relationship was found between sex and levels of reading comprehension; however, a low positive correlation was found between sex and levels of moral development, with females scoring higher on the moral judgment interview than males. (Appendixes contain copies of materials used in the study.) (FL)

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An Investigation of the Relationship Between Preadolescents' Levels of Reading Comprehension as Defined by Barrett's Taxonomy and Their Existing Levels of Moral Development as Defined by Kohlberg's States of Moral Development

Beth Anne M. Valentino

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The increasing complexity of society has resulted in greater emphasis upon the individual's ability to cope with change. Skills of rational decision-making based upon logical reasoning appear to be essential elements within a curriculum of moral development. It appears that a major goal of the teacher must be to assist the student in developing more complex methods of reasoning (Hersh and Paolitto, 1977). Proponents of a cognitive-developmental theory of moral development stress the need for educators to promote higher level reasoning abilities so that students may utilize rational judgment in coping with a changing value system.

Various similarities in the levels of reasoning suggested in Barrett's (1972) Taxonomy of Reading Comprehension and the levels of moral development (Kohlberg, 1963) prompted the current study. This research was conducted to determine if a relationship existed between preadolescents' levels of reading comprehension as defined by Barrett (1972) and their levels of moral development according to Kohlberg's Stage sequence (1963). While assessing seventh and eighth grade students' ability in these two areas, their general academic ability was held constant. If a relationship was found to exist between the level at which junior high school students were comprehending text and their existing stage of moral development, it would seem beneficial to utilize reading material containing moral dilemmas at assessed stages to enhance levels of moral reasoning. Similarly, the use of reading materials one stage higher than that at which students are reasoning might also encourage higher level comprehension skills to be practiced. If a positive correlation was found between preadolescents' levels of reading comprehension and moral development, important implications for curriculum might be proposed.

THEORETICAL BACKGROUND FOR THE RESEARCH

In contrast to the cultural transmission theory which emphasizes the attainment of knowledge of the culture, the cognitive-developmentalists stressed the importance of experience in problem-solving to encourage active changes in patterns of thought. In order that the restructuring of thought patterns might occur, progressivists assumed the

necessity of cognitive development in the process of moral growth. Kohlberg and Mayer (1972) related that cognitive-developmental theory advocates affective and cognitive dimensions as interacting forces in the moral development of an individual. While maturationist and behaviorist theories stress the individual's growth as the result of specific physiological or conditioning factors, proponents of cognitive-developmental theory assert that higher levels of moral maturity are reached through a reorganization of psychological structures. The organism's interaction with the environment is seen as the process through which cognitive structures are actively changed during an invariant sequence of stages in cognitive and moral development.

Piaget (1965), one of the foremost advocates of cognitive-developmental theory, defined morality as a system of rules from which all individuals acquire a certain respect. Piaget's developmental theory affirms the progressivist interaction viewpoint by advocating neither an explicit group nor individual-based adherence to rules during moral growth. Developmental progression includes the adherence to group rules as well as individual interaction, but the proposed sequence of Piaget illustrates the basic tenet of contemporary cognitive-developmental theorists. The child is seen as an ever-changing organism through heteronomous to autonomous stages of decision-making. The autonomy demonstrated by the child in various moral situations can only be considered as operating at a higher maturity level of obligatory feelings are abandoned and replaced by consciousness of viable alternatives.

Kohlberg's (1963) theory of moral development evolved from a developmental study of fifty boys, aged ten to sixteen, who had discussed hypothetical moral dilemmas. Six stages of moral thinking were subsequently postulated when analyses of various inter-correlations within the data showed a convincing developmental sequence.

The basic premise of Kohlberg's theory involved the behavioral criterion of internalization. Kohlberg (1968) challenged findings that suggested honest behavior is determined by situational factors of punishment, reward, group pressures and values, rather than internal conscience. Kohlberg proposed that some consistency in honesty did exist and focused research upon the development of values, reasoned judgments, and the process of internalizing moral sanctions. Each of the six stages proposed by Kohlberg represented

degrees of internalization resulting from cognitive reorganization of the meaning of culturally universal values. The stage of moral development reflects an individual's restructing of knowledge to form a perspective in decision making. Kohlberg's stages are categorized in three levels: Preconventional, Conventional, and Principled. Within the levels, Kohlberg (1975) defined six stages in which the individual's decision-making progresses from a "punishment and obedience orientation" to a "universal-ethical-principle orientation". At stage one, an individual demonstrates an obedience to authority based upon fear of punishment. The sixth and highest stage of reasoning in Kohlberg's theory defines an individual's decision of conscience in accordance with universal, comprehensive and consistent ethical principles. It is postulated that the individual chooses these principles based upon respect for human dignity and with a sense of reciprocity.

Kohlberg (1968) proposed that the ability to reason logically in moral development includes a cognitive component of role taking which has been suggested by correlations between moral judgment and cognitive advance on Piagetian cognitive-stage tasks. Research seems to suggest that maximum opportunities for role taking be utilized so that moral development might be stimulated among students rather than halted by an imposed value system.

In 1972, Barrett developed a Taxonomy of Reading Comprehension Skills to assist educators in understanding the proposed cognitive development of readers in the upper-intermediate grades. Barrett's Taxonomy of Reading Comprehension is based upon a concept of hierarchical reasoning. Barrett advised that the Taxonomy was devised as a tool for guiding comprehension instruction and should not be considered a finite listing of skills. Major purposes of the Taxonomy include: the provision of tasks which will help students to analyze and react to reading material critically; and, the demonstration of emphasis areas in selected readings where specific comprehension abilities might be enhanced.

Smith and Barrett (1974) asserted that at the Literal Level of Comprehension, the student is required to recall or identify information explicitly stated by the author in the reading selection. The Inferential Level calls for the reader to synthesize literal content, knowledge, and imagination for formulate hypotheses. The Evaluation Level

involves a process of logical, systematic judgment. The reader operating at the Evaluation Level avoids leaping to conclusions and is aware of the effect of personal values and that of the writer in relation to the material.

Smith and Barrett (1974) asserted that evaluation skills are crucial in the middle grades in order that comprehension skills might improve. It appears that moral judgments independent of content matter might become a parallel cognitive growth process if evaluation skills of comprehension are emphasized. The interacting processes of objectivity and restructuring of thought patterns contribute to the ability to take another's perspective while relinquishing egocentric tendencies.

RELATED RESEARCH

Previous research in the areas of reading comprehension, moral development and response to literature appeared to support an investigation of the possible relationship between levels of reading comprehension and moral development.

Research in reading comprehension has dealt primarily with efforts to determine its global or subskill composition. Various studies (Davis, 1944; Davis, 1968; Ruddell, 1978; Sullivan, 1970) have shown justification for the taxonomic classification system proposed by Barrett (1972). Reading comprehension has not been seen as a unitary skill and the development of a taxonomy of reading comprehension levels seems to facilitate conceptualization of the nature of mental operations necessary for specific skills.
Sullivan (1978) and Urbanowicz (1971) both found that preadolescents' ability to process judgmental statements reflected intelligence. Sullivan (1978) concluded that good comprehenders utilized decision-making and supportive examples in responses while poor comprehenders relied upon personal opinions.

The cognitive-developmental approach to moral development incorporates the stimulation of active thought in moral decision making, while recognizing that individuals function at varying stages of moral maturity. Kohlberg (1975) reported that maturity of moral judgment is not highly correlated with IQ or verbal intelligence, but levels of cognitive functioning do influence levels of moral development. Kohlberg claimed that

adolescents and adults may operate only partially at the formal cognitive level. Relations of one thing to another are considered, but all possibilities are not hypothesized. Thus, Kohlberg asserted that although over fifty percent of late adolescents and adults could function at the formal operations level, only ten percent of formal operational adults show moral reasoning at the principled level.

Cauble (1976) investigated the interrelationships among formal operations, ego identity, and principled morality among subjects from eighteen to twenty-three years of age. It was found that formal operational subjects made principled judgments more frequently than did those operating at the concrete level. Cauble implied that formal operations may be a necessary but not sufficient condition for the attainment of principled morality levels.

Additional studies (Tomlinson-Keasey and Keasey, 1974; Sullivan, 1974) supported the premise that formal thinking was a necessary but not sufficient condition for Kohlberg's Stage Four moral reasoning. In Sullivan's research findings showed that almost half of the adults subjects had not reached formal operations in logical thinking, and approximately one-third had acquired a Stage Four ability to cope with formal operations within logical thinking.

In attempting to further understand the processes involved in the moral judgments made by individuals, researchers have sought to study various factors which may or may not contribute to moral reasoning. Turiel and Rothman (1972) studied the effects of exposure to moral reasoning on the behavior of seventh and eighth grade boys. The authors concluded that behavioral responses were related differently according to varying stages of moral development.

Numerous studies of moral development have utilized literature as a medium through which situations may be presented which require subjects' moral judgments to be made. Many traditional and contemporary literary works have been examined by researchers in investigations of moral growth through reading.

Chanan (1974) questioned whether literature can have an effect upon moral development. He reported that literature may contribute to moral development, but its emphasis should be placed in description rather than explanation of content. Chanan proposed that moral development be viewed as one criterion to guide the instruction of specific literary subject matter due to the vagueness of moral content.

The role of books in the identity search experienced by adolescents has been highlighted within the last decade (Scharf, 1974; Beach, 1975; Odell, 1973). The concensus appears to be one of support for the use of literature to stimulate moral reasoning among adolescents. Students' identification with story characters who are involved in moral conflicts seems to present the need for higher levels of moral reasoning.

Recent research has focused upon the relationship of students' moral development and their response to literary selections (Dlugokinski and Firestone, 1973; Weiger, 1977). The ability to take another's perspective (other centeredness) has been found to be related to reasoning at higher levels. It seems that students exhibit characteristics of Piaget's (1965) Stages of Moral Development through their responses to literary conflicts.

Studies combining factors of reading comprehension and moral reasoning demonstrated in response to literature have not been numerous. Those that have been conducted report that literary experiences which demand justification for moral reasoning appear crucial for the adolescent functioning at various levels of cognitive and moral maturity. Findings show that through confrontation with moral dilemmas in literature, individuals recognize both society's value structures and their own, often experiencing cognitive conflict. It appeared that an investigation of the possible interrelationships among developmental trends in reading comprehension and level of moral development was warranted. This study assumed that insights into common or dissimilar cognitive functions required in both areas could be acquired to contribute to the enhancement of preadolescents' moral maturity.

THE STUDY

This study was designed to determine if preadolescents' levels of reading comprehension as defined by Barrett's Taxonomy of Reading Comprehension influence their existing levels of moral development as defined by Lawrence Kohlberg's Stages of Moral Development. This investigator also attempted to determine if females demonstrated higher levels of reading comprehension and moral reasoning than males on the assessment measures.

DESIGN

The statistical design employed in this study incorporated an intercorrelation matrix and the determination of some partial correlations. Three instruments were administered to the same group of subjects on three separate sessions within a three-week time period. An exception ~~was the~~ oral Kohlberg Moral Judgment Interviews which were administered at subjects' convenience to approximately half of the total sample (N=103).

This design was utilized for the data analysis to determine if:

1) there is a significant positive correlation between levels of reading comprehension and levels of moral development holding general academic ability constant.

Criterion variable: levels of moral development

Measure of criterion variable: Kohlberg Moral Judgment Interview

Predictor variable 1: Levels of reading comprehension

Measure of predictor variable 1: A test of Levels of Reading Comprehension based on Barrett's Taxonomy designed by this researcher

Predictor variable 2: General academic ability

Measure of predictor variable 2: Otis-Lennon Mental Ability Test (Intermediate Level Form J)

Units of statistical analysis: First-order partial correlation coefficient ($r_{12.3}$), using Moral Maturity Scores, reading comprehension levels 1, 2, or 3 scores, and Otis-Lennon Mental Ability Test raw scores.

Test of significance: t test with N-3 degrees of freedom.

2) There is a significant positive correlation between general academic ability and levels of reading comprehension.

Criterion variable: levels of reading comprehension

Measure of criterion variable: A Test of Levels of Reading Comprehension based on Barrett's Taxonomy designed by this researcher.

Predictor variable: general academic ability

Measure of predictor variable: Otis-Lennon Mental Ability Test (Intermediate Level Form J)

Units of statistical analysis: Pearson product-moment correlation coefficient using reading comprehension level 1, 2, or 3 scores, and Otis-Lennon Mental Ability Test raw scores.

Test of significance: t test of the significance of the correlation between paired observations.

3) There is a significant positive correlation between general academic ability and levels of moral development.

Criterion variable: levels of moral development

Measure of criterion variable: Kohlberg Moral Judgment Interview

Predictor variable: General academic ability

Measure of predictor variable: Otis-Lennon Mental Ability Test (Intermediate Level Form J)

Units of statistical analysis: Pearson product-moment correlation coefficient using Moral Maturity scores and Otis-Lennon Mental Ability Test raw scores.

Test of significance: t test of the significance of the correlation between paired observations.

4) There is a significant positive correlation between sex and levels of reading comprehension.

Continuous variable: levels of reading comprehension

Measure of continuous variable: A Test of Levels of Reading Comprehension based on Barrett's Taxonomy designed by this researcher.

Dichotomous variable: Sex

Measure of dichotomous variable: Assignment of the value of 0 for males; 1 for females

Units of statistical analysis: Point Biserial Correlation using reading comprehension levels 1, 2, or 3 and values 0 or 1.

Test of significance: two-tailed $\underline{t}$ test of significance of r_{pbi} from zero.

5) There is a significant positive correlation between sex and levels of moral development.

Continuous variable: levels of moral development

Measure of continuous variable: Kohlberg Moral Judgment Interview.

Dichotomous variable: Sex

Measure of dichotomous variable: Assignment of the value of 0 for males; 1 for females.

Units of statistical analysis: Point Biserial Correlation using Moral Maturity scores and values of 0 to 1.

Test of significance: two-tailed $\underline{t}$ test of significance of r_{pbi} from zero.

SUBJECTS

This study involved the administration of three instruments to the same group of preadolescents. The instruments were: A Test of Levels of Reading Comprehension based on Barrett's Taxonomy of Reading Comprehension, the Otis-Lennon Mental Ability Test, and Lawrence Kohlberg's Moral Judgment Interview (Form A).

The subjects in this study were randomly selected from the seventh and eighth grades of the Lionville Junior High School in the Downingtown Area School District in Chester County, Pennsylvania. The selection of students from the seventh and eighth grade levels was based upon the research of Kohlberg and Turiel (1971) who reported that certain age periods were condusive to the stimulation of higher stages of moral development. The first stage defined by Kohlberg and Turiel was that of Preadolescence (ages ten to thirteen), during which the transition from Preconventional to Conventional morality was most often observed.

From the total sample (N=103), students were identified according to levels of reading comprehension and levels of moral development. The Test of Levels of Reading Comprehension, the Otis-Lennon Mental Ability Test, and the Kohlberg Moral Judgment Interview were administered to all students in the sample. Fifty-three seventh-grade students and fifty eighth-grade students comprised the total sample. Due to the amount of time involved in the oral administration of the interviews (one hour) and the total sample (N=103), it was decided that approximately half of the total sample would be administered the test orally. An attempt was made to randomly select approximately half of the students from each grade level (seven and eight) to respond to the interviews orally. Forty subjects from the total sample participated in the Moral Judgment Interview orally, while the remainder were administered this instrument in written form.

The sample selection method of randomization did not attempt to select subjects based upon the independent variables of age, socio-economic level, religious affiliation, education of the head of the household, family income, or occupation of the head of the household.

The population was predominantly white; forty-eight percent of the total sample were male, and fifty-two percent were female. All subjects were between twelve and fourteen years of age.

INSTRUMENTS AND PROCEDURES

Data in this study were collected using the following three instruments: The Test of Levels of Reading Comprehension based on Barrett's Taxonomy which was designed by this researcher; the Otis-Lennon Mental Ability Test; and the Kohlberg Moral Judgment Interview. All three instruments were administered in written form at separate sessions during a three-week period. The Kohlberg Moral Judgment Interviews which were given orally were administered during a three-month period in accordance with the availability of the subjects.

The Otis-Lennon Mental Ability Test was administered in this study as a measure of general academic ability which was held constant in the correlational analyses of levels of moral development and levels of reading comprehension. The Otis-Lennon Mental Ability Test is comprised of six levels which measure verbal, numerical, and abstract reasoning abilities considered necessary for success in the American culture.

The Kohlberg research instrument is comprised of three parts: the standard moral interview format, structural interviewing techniques, and a standard-form scoring manual. The moral judgment dilemma provides the basis for the hypothetical conflict situations which require the subject to choose between X and Y alternatives. Kohlberg, Colby, Gibbs, Speicher-Dubin, and Power (1978) claimed that the dilemmas prompt the examinee to weigh the merit of a specific set of values such as "life" with another set of values such as "law". The reasons for choices varies across age groups, but Kohlberg proposed that the "why" behind the choice provides access to the internal moral structures of the subject. According to Kohlberg, structural interviewing involves going beyond a subject's attitudes or opinions to the justification given for the response. The moral interview format consists of three dilemmas with questions, and each dilemma contains two issues to be resolved. Kohlberg's criteria for construction of the dilemmas includes two requirements: comprehensibility to preadolescents, adolescents, and adults in all cultures; and adequate sampling of the basic Moral Issues involving adolescents and adults in every culture.

The test of Levels of Reading Comprehension was designed by this researcher to determine the level of reading comprehension at which subjects in this study were functioning. Three of the four original levels have been used as a basis for question construction following content area passages. They are: Literal, Inferential, and Evaluation. The three passages in the instrument include the content areas of physical education, science, and social studies. Readability of the passages was determined by the Edward Fry "Graph for Estimating Readability" and found to range from 6.0 to 9.0. The passage contents were selected and written by this researcher with attempts to provide high-interest informative reading experiences for the students involved in the study. Supplementary information was obtained from Tennis magazine, pamphlets by the U.S. Department of Housing and Urban Development, and reference materials concerning the Equal Rights Amendment. ~~Each passage~~ is approximately equal in length and is followed by ten questions which were developed to test the aforementioned three levels of comprehension.

Each reading comprehension level was represented by ten questions in the total test. Within the individual levels, an effort was made to design questions which required a variety of comprehension skills listed in Barrett's Taxonomy. A sampling of the various types of skills is represented by the instrument's total of thirty questions.

RELIABILITY MEASURES

The Otis-Lennon Mental Ability Test

An estimate of the reliability of the Otis-Lennon Mental Ability Test as it was used in this study was obtained by application of the Kuder-Richardson 21 formula (Martuza, 1977). Results showed that $KR_{21} = .9143$.

The Kohlberg Moral Judgment Interview

For this study, interrater reliability was found by correlating scores of this researcher and those of Marvin Berkowitz of the Center for Moral Education at Harvard University. Five protocols were selected at random from the total sample (N=103)

and an interrater reliability coefficient was calculated. The Pearson product-moment correlation coefficient was calculated as $r = .9049$. Table 1 shows the raw data:

TABLE 1

RAW DATA ON MORAL MATURITY SCORES

Subject	Moral Maturity Scores This Researcher	Harvard
A	215	240
B	240	238
C	283	294
D	207	242
E	267	286

A Test of Levels of Reading Comprehension Based on Barrett's Taxonomy of Reading Comprehension

Face validity for this instrument was obtained by distribution of the test to three faculty members in the Department of Curriculum and Instruction in the College of Education at the Pennsylvania State University and two graduate students who are certified Reading Specialists. This researcher established a rating criterion which eliminated any item receiving a rating of 2 or less on a scale of 0 through 5 from three of five validators. Ratings from 0 to 5 on this scale indicated how well each question measured the specific level of comprehension for which it was designed to measure (0 = low, 5 = high). Table 2 shows the mean rating of each test question as designated by the five raters and also the grand mean of all thirty questions.

TABLE 2

MEAN RATINGS OF QUESTIONS FROM A TEST OF LEVELS OF READING COMPREHENSION

Means	Question Number 1	2	3	4	5	6	7	8	9	10
Passage #1	4.6	4.2	4.2	4.2	4.4	3.8	4.0	4.0	4.2	4.0
Passage #2	4.6	4.2	4.0	3.2	4.0	4.2	4.4	3.8	4.4	3.8
Passage #3	4.6	4.6	4.6	3.8	4.0	4.0	4.2	4.2	4.2	4.2
Grand Mean	4.2									

Prior to administration, two certified reading consultants were asked to respond to the thirty test questions. To establish further face validity, their responses to the Inferential and Evaluative level questions were pooled with those of this researcher to form the master response key used in the final scoring of this instrument.

Interrater reliability was assessed in analyzing data from the Inference and Evaluation level questions in the test. Ten tests were selected at random from the population sample (N=103) and scored by both this researcher and another certified reading consultant. The degree of agreement was measured by calculating the Pearson product-moment correlation coefficient between both raters' scores on all thirty questions from the ten tests. The average correlation coefficient was calculated, r=.817. Each of the correlation coefficients in Table 5 was converted to a Fisher's Z score, and the average Fisher's Z score was obtained (1.5008). This average Fisher's Z score was then converted back to a correlation coefficient, r=.905. Table 3 shows the correlation coefficients and Fisher's Z-Transformations from the ten tests.

TABLE 3

INTERRATER RELIABILITY ESTIMATES AND
FISHER'S Z-TRANSFORMATIONS

Test	PPM Correlation Coefficient	Fisher's Z-Transformation
A	.81	1.127
B	.59	.678
C	.73	.929
D	.99	2.994
E	.65	.775
F	.73	.929
G	.82	1.157
H	.87	1.333
I	.97	2.092
J	.99	2.994

SCORING PROCEDURES

The Otis-Lennon Mental Ability Test (Form J) was administered to 103 seventh and eighth grade students in this study. The administration time was 45-50 minutes. The Intermediate Level Test consisted of eighty items arranged in spiral omnibus form. Pupil responses were marked directly in the test booklet and hand-scored by this researcher. For purposes of this study, only the raw scores were used.

Permission was sought from the Center for Moral Education at Harvard University during the Scoring Workshop in July, 1978 to use Form A of the Moral Judgment Interviews in this study. The Moral Judgment Interviews were administered in written form at a separate session to seventh and eighth grade students (N=103) who had been administered the Otis-Lennon Mental Ability Test and A Test of Levels of Reading Comprehension based on Barrett's Taxonomy.

The written responses were scored by this researcher and Marvin Berkowitz of Harvard University.

In the standard scoring of a dilemma, the scorer is required to arrive at a stage score for each of the two issues in the dilemma. Each judgment and moral reason is matched to a criterion judgment in the manual. The unit is a moral judgment, a valued moral norm, and a value element. The issues or norms considered are the following: punishment, property, affiliation, authority, character, law, contract, truth, liberties, life, and sex (Kohlberg, et al., 1978). In the scoring process, the responses to a single dilemma are separated according to issue, and within each issue, material is separated according to norm. Each norm is then separated into norm/element moral judgments and the stage is determined by matching the moral judgments to criterion judgments in the scoring manual. It is necessary to distinguish between norms and elements in this process. Norms refer to roles, rules, and normative relations between persons. Norms are viewed as social value objects independent of a subject's attitude toward them. Elements consist of attitudes and principles which are internal feelings toward norms which given the definition. Kohlberg, et al. (1978) proposed that an individual's moral reasoning about an issue involves the interaction of elements and norms. Therefore, by using the basic scoring unit of the criterion judgment, the scorer analyzes an issue, stage, norm, and element.

In scoring the issues, a pure stage or transitional score may be used (e.g. 2, 2-3, or 3). If a stage is represented by 80 percent or more of the criterion judgment scores on an issue, a pure stage score for that issue is derived. Some issues may be represented by a double score if two stages are identified by 20 percent or more of an issue's criterion judgment scores (e.g., 2-3, 2-4). If three stages are shown with 20 percent or greater frequency, the arithmetic mean of all the criterion judgment scores if found and the stage score is derived according to the following values:

1 - 1.19 = Stage 1
1.20 - 1.80 = Stage 1-2
1.81 - 2.19 = Stage 2
2.20 - 2.80 = Stage 2-3
(Kohlberg, et al., 1978)

Total protocol scores are classified according to three stage types: pure (e.g., 2), consolidating (in which the major stage is the higher and the minor stage is the lower, e.g., 3 (2)) and traditional (in which the minor stage is the higher, and the major stage is the lower, e.g., 2 (3)). When an exact division between two stages exists, the consolidating type is assigned. In assigning the total protocol score, weights are given to issue scores according to their salience. The maximum weight of 3 is given to a match (with no guess) on an issue. A low weight of 1 is given to a guess issue score. Only the Moral Maturity scores were used in the statistical treatment of the data. To arrive at a moral maturity score, the scorer multiplies the point totals for each stage by the number of the stage. The products are then summed and divided by the total number of points assigned. This value is then multiplied by 100.

The Reading Comprehension instrument employed a criterion-referenced framework within each comprehension level. Raw score totals were not considered pertinent data for analysis. This researcher wished to determine the highest level of comprehension based on Barrett's Taxonomy at which the student functions. A mastery level of seven out of ten questions answered correctly at each level was the accepted criterion measure. At the Literal Level, the subject was given one point for each correct answer which was coded on a separate answer sheet. At the Inference level, the students' responses received one point if judged "acceptable" according to logical reasoning, and no point value if judged "unacceptable". Interrater reliability measures were employed for both the Inference and Evaluation level questions. At the Evaluation level, the subject received one point for an acceptable response based upon the reasons given for the selection of "fact", "opinion", or "no effect". No point value was given for responses judged illogical by the raters, or unanswered questions at any of the levels. In questions requiring extended responses, the raters were asked to consider quality of answers of prime importance in judging acceptability. Length of answers was not emphasized. At the Inference and Evaluation levels, raters were asked to examine responses for the rationale employed by the subject. Constant referral to Barrett's Taxonomy was necessary in rater judgment.

Point values were calculated for each of the three reading comprehension levels and a single value from 0 through 10 represented achievement at each individual level. If mastery occurred (7 out of 10 possible points) at each level, a numeral designation was given. If mastery did not occur at the Literal level, the numeral "0" was assigned. The Literal level was designated by the numeral "I", the Inference level by "2" and the Evaluation level by "3". Each subject was assigned a numeral to designate a reading comprehension level according to the skills identified in Barrett's Taxonomy and these test scores were correlated with scores of moral maturity from the Kohlberg Moral Judgment Interview and the Otis-Lennon Mental Ability Test scores. The reading comprehension level scores were also correlated with sex.

RESULTS

The variables used in the statistical analysis of this study included the following: grade, sex, moral maturity scores, method, reading comprehension level scores, and Otis-Lennon scores. Data which are considered pertinent to the results are underlined in Table 4:

TABLE 4

DESCRIPTIVE MEASURES ON VARIABLES

Variable	Cases	Mean	Standard Deviation
Grade	103	7.4854	.5022
Sex	103	.5243	.5019
Moral Maturity Scores	103	240.4369	39.8199
Method[a]	103	.3883	.4898
Reading Comprehension Level Scores	103	2.0583	.9983
Otis-Lennon Scores	103	54.8155	13.3319

[a]Method = oral or written administration of Kohlberg Moral Judgment Interviews.

Table 5 shows the total intercorrelation matrix of all variables used in the statistical analysis.

Correlation coefficients which are pertinent in the interpretation of the data are underlined. The total number of cases (N=103) is signified in parentheses beneath each coefficient. The symbol "S" stands for the exact probability of making a Type I error if the population correlation were actually zero.

TABLE 5

INTERCORRELATION MATRIX OF ALL VARIABLES

	Sex	Moral Maturity Scores	Method	Reading Comprehension Level Scores	Otis-Lennon Scores
Grade	.1473 S=.069	.4266** S=.001	.1428 S=.075	.1777* S=.036	.1409 S=.078
Sex	1.0000 S=.001	.1704* S=.043	-.0387 S=.349	.1537 S=.061	.0498 S=.309
Moral Maturity Scores	.1704* S=.043	1.0000 S=.001	.1576 S=.056	.3898** S=.001	.3389** S=.001
Method	-.0387 S=.349	.1576 S=.056	1.0000 S=.001	.0736 S=.230	-.2036* S=.020
Reading Comprehension Level Scores	.1537 S=.061	.3898** S=.001	.0736 S=.230	1.0000 S=.001	.4605** S=.001
Otis-Lennon Scores	.0498 S=.309	.3389** S=.001	-.2036* S=.020	.4605** S=.001	1.0000 S=.001

N=103

* = $p < .05$
** = $p < .01$

The data revealed a moderate positive correlation between subjects' scores on the Kohlberg Moral Judgment Interviews and the Test of Levels of Reading Comprehension ($r = .3898$). This correlation was statistically significant. In order

to determine the relationship between these two variables excluding the variable of general academic ability, a first-order partial correlation coefficient was calculated, $r_{xy.z}$=.2799.

The t test of significance with N-3 degrees of freedom was calculated, t=2.916, df=100, $p<.05$. A comparison of the calculated t and the tabled t showed statistical significance, t=2.916 > t=1.96, $p < .05$.

This study revealed a positive significant correlation, r=.4605, between subjects' scores on the Test of Levels of Reading Comprehension and the Otis-Lennon Test of Mental Ability. This relationship seems to indicate that students who demonstrated higher academic ability also were able to comprehend reading material at higher levels (i.e., Inference and Evaluation).

A low positive correlation was found, r=.3389, between subjects' scores on the Otis-Lennon Test of Mental Ability and the Kohlberg Moral Judgment Interview. This correlation proved to be significant. The results suggest that the ability to make higher level moral judgments is partially dependent upon general academic ability. However, the low positive correlation found between reading comprehension and levels of moral development appears to indicate that some other factor is involved in the relationship as measured in this study.

In discussing the relationship between general academic ability and moral maturity, an additional finding seems pertinent. It was assumed that those subjects who participated in the Kohlberg Moral Judgment Interview orally would achieve higher scores than those who were administered the test in written form. It was reasoned that with more verbal prodding for in-depth responses in the oral interview, higher moral maturity levels might result in comparison to the written form. Results showed that those students who had been administered the Kohlberg Moral Judgment Interview orally showed less academic ability than those subjects who responded in written form. A significant negative correlation, r=.2036, between method and general academic ability was found. Because subjects appeared to have responded in greater depth with additional prodding in the oral interview, a value

of "1" was given to the oral method in the data analysis. Written method was given a value of "0". A low positive correlation did result between moral maturity scores and method, r=.1576, but it was not significant. The level of significance (S=.056) might indicate that with a larger population the relationship between oral administration of the Kohlberg instrument and subjects' moral maturity scores could prove to be significant at the .05 level.

The results showed a low positive correlation (r=.1537) between sex (females = 1, males = 0) and levels of reading comprehension. This correlation was not significant ($p < .05$). This lack of a significant relationship between these two variables is consistent with the earlier finding that sex and general academic ability were not significantly related (r=.0498, $p < .05$). It appears that although a significant correlation between general academic ability and levels of reading comprehension did exist in this study, r=.4605, the tendency for females to achieve higher scores on the Otis-Lennon Test of Mental Ability and the Test of Levels of Reading Comprehension was not significant.

A low positive correlation was found between sex (females =1, males =0) and levels of moral development, r=.1704. This correlation was significant. It seems that there was a tendency for females to score higher on the Kohlberg Moral Judgment Interview than males. An additional finding indicated that females who took the Kohlberg test orally scored lower than those who were administered the test in written form. The correlation of -.0387 was not significant between sex and method (oral =1, written =0).

CONCLUSIONS AND DISCUSSION

The relationship found between levels of reading comprehension and levels of moral development suggests that preadolescents are using similar cognitive processing in each of these academic experiences which require decision-making skills. The immediate task is to identify more clearly the cognitive restructuring which appears to take place as individuals move from literal understanding to abstract thinking.

The scoring of the Kohlberg instrument is heavily dependent upon the subject's reasons for answers to the questions concerning the moral dilemmas. Similarly, the inferential and evaluative questions within the Test of Levels of Reading Comprehension required subjects to defend their responses with logical reasons. Based upon the findings, it is concluded that the ability to explain one's choices with reasonable arguments might indeed by a key factor in describing the relationship between an individual's progression or stagnation within these two hierarchies. If this is so, Kohlberg's premise that presenting material one stage higher than that at which the individual is operating would certainly involve higher skills of reading comprehension, namely those of inference and making judgments. If an individual is reasoning at a Preconventional stage of moral development and reading comprehension is basically at the literal level, reading material which includes dilemmas that provide conflict to lead to Conventional level thinking are in order. The practice of requiring defense of choices for Preconventional level persons could be an effective treatment for stage transition. Similarly, Conventional level thinkers could be stimulated with reading material that calls for Principled level reasoning and demands even more depth of logical thought in evaluative responses.

It appears that the relationship of levels of reading comprehension and levels of moral development reflect a preadolescent's perspective on issues that are confronted. Lower levels of reasoning suggest that material is viewed literally and thought beyond the information given is nonexistent. The defense of opinion seems outside the realm of thinking of these individuals. Although moral judgment and reading comprehension were found to be related to general academic ability, there still remains some component of reasoning in both areas when ability is held constant.

The prodding involved in the Kohlberg Interview which centers upon the repetition of the question "Why?" is not emphasized in standardized reading tests which contain evaluative level questions. This researcher concludes that preadolescents need continual prodding subsequent to viewing reading material to advance from a literal to inferential and evaluative stages.

The findings suggest that students who exhibit higher general academic ability also demonstrate ability to comprehend at higher stages than those of lower academic ability. It would seem plausible that facility with problem solving would contribute to an individual's attainment of criterion scores on the Test of Levels of Reading Comprehension at the Inference and Evaluation levels. Facility with verbal concepts is also a factor which might affect performance on both the Otis-Lennon and the Reading Comprehension tests.

It appears that students who demonstrate more capable academic ability will also reason about moral issues at higher levels than those whose academic ability is not as strong. However, the findings highlighted an important element in students' levels of moral reasoning. Emphasis should be placed upon the oral mode of communication when dealing with all students, but especially those of lower general academic ability. It seems that the process verbalizing one's thoughts about moral issues encourages students of lesser academic ability to reason more deeply than in the written mode. The interviewer's constant prodding for reasons behind students' decisions seems to have a positive effect in enhancing higher stage thinking. Because students of lower general academic ability did not necessarily exhibit lower scores on the interviews given orally, it is suggested that the oral mode be given high priority in exercises with students of all academic ability levels.

The finding that females of preadolescent age show higher moral reasoning than males seems to indicate that possible factors which could cause this to occur should be investigated. Erickson (1974) reported that girls reach plateaus in adolescence during which they do not advance to higher stages of moral reasoning as boys do. In light of the findings concerning preadolescents in this study, influences of later adolescence upon moral judgments of females should be studied. Emotional factors such as sentimentality and maternal insticnts could affect moral judgments. During the oral interview sessions, this researcher observed greater reluctance upon the part of females than males to make moral decisions which required punishment. Differences in

sexual complexion seem to influence certain responses in the Kohlberg instrument. The fact that female preadolescents do not show higher levels of reading comprehension than males could reflect the absence of these emotional factors. However, future research involving females and moral reasoning could depict very different results. The changing roles of women in society might eradicate sexual differences in perspectives on moral issues.

IMPLICATIONS FOR FUTURE RESEARCH

The component which might affect both moral development and the higher level skills of reading comprehension needs yet to be defined. The use of literature containing moral dilemmas with emphasis upon the evaluative skills of comprehension is proposed in light of the findings of this study. One might assume that if a student has reached the Conventional Level of moral development, his comprehension skills include at least those at the Inferential level. Perhaps then systematic presentation of material which involve dilemmas one stage higher than that at which the student is functioning should be presented. Follow-up questions at the Inferential and Evaluative levels as defined by Barrett's Taxonomy should be included with an oral communication component provided so that moral reasoning might be verbalized.

Further research might also investigate the effects of controlling such variables as religion, socio-economic status and age. Because the past decade has demonstrated vast changes in females' vocational choices, interest in personal fulfillment and various effects of the women's movement, future research might conduct similar correlational analyses between males and females at the preadolescent and adolescent age periods. The results of this study indicated that females significantly demonstrated higher levels of moral reasoning than males, but not significantly higher levels of reading comprehension or general academic ability. Additional research might attempt to identify variables, if any, which influence females'

responses to the moral dilemmas. Literature with contrasts of principal male characters and female characters involved in the dilemmas could affect results.

Longitudinal studies should be conducted which involve the administration of the Kohlberg Moral Judgment Interview to preadolescent, adolescent and adult females. The population might include women involved in full-time careers, housewives, and a variety of other vocational alternatives.

Special emphasis should be placed upon assuming the role of the main character faced with a moral dilemma within literary selections. Experimental research might be conducted contrasting groups which read dilemmas, role-play and discuss issues; groups which read dilemmas and respond in written form; and groups which read dilemmas with no response. Pre and post stage assessment should be conducted with the Kohlberg Moral Judgment Interview.

A follow-up investigation of the preadolescent subjects involved in this study is recommended. Moral stage assessment and reading comprehension level evaluation should be conducted at the conclusion of the senior year in high school.

PEDAGOGICAL IMPLICATIONS

In view of the findings of this study, it seems that the cognitive processing required in the comprehension of text and the moral reasoning necessary to deal with conflicts share similar characteristics. Because junior high school students are often confronted with moral issues, literary selections with issues which are relevant provide an excellent vehicle to enhance higher level reasoning. Reading literature, discussing issues in which the characters must make decisions and perhaps subsequent written response by the students all create an in-depth language arts program. Simultaneously, the teacher can attempt to enhance moral development by assessing present moral stages, and presenting information one stage higher than that at which students are functioning.

Current literature (newspapers, credible magazines) and required selections (i.e., The Scarlet Letter) lend themselves to reinforcement of decision-making skills.

A junior high school curriculum which incorporates discussion of current moral issues such as the use of nuclear power within the language arts program is recommended. Encouraging students to defend orally their viewpoints on issues would reinforce effective communication skills. Stages of moral reasoning would also be brought into focus for both the student and teacher.

Instruction which uses the cognitive-developmental theory as its framework needs to incorporate experiences which enhance complex methods of reasoning. Literature units which require the student to take an active role in the dramatization of story conflicts are recommended. Behavioral objectives which emphasize the student's assuming of another's perspective should be an essential element in the daily lesson plan. Teaching within a cognitive-developmental structure should demonstrate a necessary balance between teacher oral directives, student silent reading of dilemmas, and student-teacher oral discussion subsequent to the reading. The lecture mode of instruction should be discouraged so that student interaction with the printed material is encouraged.

If reading groups of varying ability levels are working within the same classroom, the instructional objectives should include the presentation of material at applicable levels of moral development. Some material might be paraphrased and discussed with the whole class occasionally to expose lower ability students to reasoning at higher levels than their own.

Teachers also need to be cognizant of situations within the classroom and the school which might offer opportunities for decision-making skills to be exercised (i.e., punishment for theft within the school, destruction of property, or physical harm resulting from fighting). Discussions of these issues and their similarities to literature which has been read is recommended so that students become aware of the relevance of judgment making to their personal lives.

The Kohlberg Moral Judgment Interview might be used as a diagnostic tool to assess moral stage development within an integrated Literature/Moral Development Curriculum. However, it should not be considered a standardized instrument upon which to base evaluation of an individual's moral behavior. Teachers utilizing the Kohlberg Moral Judgment Interview should be carefully instructed to observe the difference between student opinions and actual moral judgments so that validity in stage assessment is maintained. In teacher-training involving the use of the interview, statements which include "If I were him, I'd. . ." should be disregarded. The student's judgment concerning what the person in the dilemma should do are to be accepted.

Teachers who utilize cognitive-developmental philosophical concepts should develop activities which facilitate cognitive restructuring. Workshops in which the teachers assume the role of their students while participating in classroom simulations might be a most effective method of inservice training in moral education. Language Arts teachers should be trained to utilize specific methods of questioning. The importance of the question "Why?" should be stressed for effective prodding techniques to be used in the classroom. Frequent use of this question in response to literature is recommended for maximum growth of moral maturity.

Perhaps if students are consistently required to defend their decisions, they will recognize a commitment to the thought processes they are using. The goal is one of producing literate individuals who are able to reason logically concerning the decisions they make throughout their lives. With societal pressures as they are presently, there appears to be no better time to emphasize sound decision-making abilities within our classroom instruction.

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APPENDIX A

KOHLBERG'S STAGES OF MORAL DEVELOPMENT

I. PRECONVENTIONAL LEVEL

Stage 1. "The punishment and obedience orientation." The physical consequences of action determine its goodness or badness, regardless of the human meaning or values of these consequences.

Stage 2. "The instrumental-relativistic orientation." Right action consists of that which instrumentally satisfies one's own needs and occasionally the needs of others. Elements of fairness, of reciprocity and of equal sharing are present. Reciprocity is a matter of "You scratch my back and I'll scratch yours."

II. CONVENTIONAL LEVEL

Stage 3. "The good-boy nice-girl orientation." Good behavior is that which pleases or helps others and is approved by them. There is much conformity to stereotypical images of what is majority or "natural" behavior.

Stage 4. "The law and order orientation." This is orientation toward authority, fixed rules, and the maintenance of the social order. Right behavior consists of doing one's duty.

III. PRINCIPLED LEVEL

Stage 5. "The social contract, legalistic orientation." Right action tends to be defined in terms of general individual rights and standards which have been critically examined and agreed upon by the whole society. There is emphasis upon the "legal point of view," but with an emphasis upon the possibility of changing laws in terms of rationale considerations of social utility.

Stage 6. "The universal-ethical-principle orientation." Right is defined by the decision of conscience in accord with self-chosen ethical principles appealing to logical comprehensiveness, universality, and consistency. These are universal principles of justice, of the reciprocity and equality of human rights, and of respect for the dignity of human beings as individual persons.

APPENDIX B

SAMPLE OF KOHLBERG'S MORAL JUDGMENT INTERVIEW

MORAL JUDGMENT INTERVIEW

FORM A

Dilemma III: In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid $200 for the radium and charged $2,000 for a small doze of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about $1,000, which is half of what it cost. He told the druggist that his wife was dying, and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz gets desperate and considers breaking into the man's store to steal the drug for his wife.

1. Should Heinz steal the drug?

   1a. Why or why not?

2. If Heinz doesn't love his wife, should he steal the drug for her?

   2a. Why or why not?

3. Suppose the person dying is not his wife but a stranger. Should Heinz steal the drug for the stranger?

   3a. Why or why not?

4. (If you favor steaing the drug for a stranger): Suppose it's a pet animal he loves. Should Heinz steal to save the pet animal?

   4a. Why or why not?

5. Is it important for people to do everything they can to save another's life?

   5a. Why or why not?

6. It is against the law for Heinz to steal. Does that make it morally wrong?

   6a. Why or why not?

7. Should people try to do everything they can to obey the law?

   7a. Why or why not?

   7b. How does this apply to what Heinz should do?

***

Dilemma III': Heinz did break into the store. He stole the drug and gave it to his wife. In the newspapers the next day, there was an account of the robbery. Mr. Brown, a police officer who knew Heinz, read the account. He remembered seeing Heinz running away from the store and realized that it was Heinz who stole the drug. Mr. Brown wonders whether he should report that Heinz was the robber.

1. Should Officer Brown report Heinz for stealing?

   1a. Why or why not?

2. Officer Brown finds and arrests Heinz. Heinz is brought to court, and a jury is selected. The jury's job is to find whether a person is innocent or guilty of committing a crime. The jury finds Heinz guilty. It is up to the judge to determine the sentence. Should the judge give Heinz some sentence, or should he suspend the sentence and let Heinz go free?

   2a. Why?

3. Thinking in terms of society, should people who break the law be punished?

   3a. Why or why not?

   3b. How does this apply to how the Judge should decide?

4. Heinz was doing what his conscience told him when he stole the drug. Should a law-breaker be punished if he is acting out of conscience?

   4a. Why or why not?

***

Dilemma I: Joe is a fourteen-year-old boy who wanted to go to camp very much. His father promised him he could go if he saved up the money for it himself. So Joe worked hard at his paper route and saved the $40 it cost to go to camp and a little more besides. But just before camp was going to start, his father changed his mind. Some of his friends decided to go on a special fishing trip, and Joe's father was short of the money it would cost. So he told Joe to give him the money he had saved from the paper route. Joe didn't want to give up going to camp, so he thinks of refusing to give his father the money.

1. Should Joe refuse to give his father the money?

   1a. Why or why not?

2. Is the fact that Joe earned the money himself the most important thing in this situation?

   2a. Why or why not?

3. The father promised Joe he could go to camp if he earned the money. Is the fact that the father promised the most important thing in the situation?

   3a. Why or why not?

4. Is it important to keep a promise?

   4a. Why or why not?

5. Is it important to keep a promise to someone you don't know well and probably won't see again?

   5a. Why or why not?

6. What do you think is the most important thing a son should be concerned about in his relationship to his father?

   6a. Why is that the most important thing?

7. What do you think is the most important thing a father should be concerned about in his relationship to his son?

   7a. Why is that the most important thing?

APPENDIX C

SCORING SHEET FOR THE KOHLBERG
MORAL JUDGMENT INTERVIEW

Interviewer's Name _____ Form (circle) A B

(Circle Chosen Issue) Dilemma III (Form A) or (Form B)

LIFE (Form A) or LIFE-QUALITY (Form B)			LAW (Form A) or LAW/LIFE PRESERVE (Form B)		
Question	CJ/Norm & Element	Stage	Question	CJ/Norm & Element	Stage
Issue Score:	Intuitive:	Stand-ard:	Issue Score:	Intuitive:	Stand-ard:

(Circle Chosen Issue) Dilemma III (Form A) or (Form B)

MORALITY & CONSCIENCE			PUNISHMENT		
Question	CJ/Norm & Element	Stage	Question	CJ/Norm & Element	Stage
Issue Score:	Intuitive:	Stand-ard:	Issue Score:	Intuitive:	Stand-ard:

(Circle Chosen Issue) Dilemma I (Form A) or (Form B)

CONTRACT			AUTHORITY		
Question	CJ/Norm & Element	Stage	Question	CJ/Norm & Element	Stage
Issue Score:	Intuitive:	Stand-ard:	Issue Score:	Intuitive:	Stand-ard:

Summated Weightings from 1 ___ 2 ___ 3 ___ PROTOCOL SCORE:
Issue Scores by Stage 4 ___ 5 ___ Global _____
MMS _____

APPENDIX D

CALCULATION SHEET FOR THE DERIVATION OF MORAL MATURITY SCORES OF THE KOHLBERG MORAL JUDGMENT INTERVIEW

Subject's Code Number _____ Grade (circle) 7 8
Date Scored _____ Sex (circle) M F

Weightings:

Match (chosen issue) = 3 points

Match (nonchosen issue) = 2 points

Guess (issue or nonissue) = 1 point

(Circle Chosen Issue)

LIFE	LAW	MORALITY	PUNISHMENT	CONTRACT	AUTHORITY
Issue Total:					

LIFE issue score yields ____ points for stage _____.
LAW issue score yields ____ points for stage _____.

MORALITY issue score yields ____ points for stage _____.
PUNISHMENT issue score yields ____ points for stage _____.

CONTRACT issue score yields ____ points for stage _____.
AUTHORITY issue score yields ____ points for stage _____.

STAGES

1 _____
2 _____
3 _____
4 _____

Total points assigned: _____

___ points x 1 = _____
___ points x 2 = _____
___ points x 3 = _____
___ points x 4 = _____

Total points = _____ no. of points

total = ____ x 100 = MMS

FOR GLOBAL SCORE:

MAJOR STAGE = the stage with the highest percentage of weighted issue scores.

MINOR STAGE = assigned if 20% or more of weighted issue scores are at that stage.

Examples:
Consolidating 3(2)
Transitional 3(4)

PROTOCOL SCORES: GLOBAL _____
MMS _____

APPENDIX E

BARRETT'S TAXONOMY OF READING COMPREHENSION

Taxonomy of Reading Comprehension (Barrett, 1972)

1.0 Literal Recognition or Recall. Literal comprehension requires the recognition or recall of ideas, information, and happenings that are explicitly stated in the materials read. Recognition Tasks, which frequently take the form of purposes for reading, require the student to locate or identify explicit statements in the reading selection itself or in exercises that use the explicit content of the reading selection. Recall tasks demand the student to produce from memory explicit statements from a selection; such tasks are often in the form of questions teachers pose to students after a reading is completed. Two additional comments seem warranted with regard to literal comprehension tasks. First, although literal comprehension tasks can be overused, their importance cannot be denied, since a student's ability to deal with such tasks is fundamental to his ability to deal with other types of comprehension tasks. Second, all literal comprehension tasks are not necessarily of equal difficulty. For example, the recognition or recall of a single fact or incident may be somewhat easier than the recognition or recall of a number of facts or incidents, while a more difficult task than either of these two may be the recognition or recall of a number of events or incidents and the sequence of their occurrence. Also related to this concern is the hypothesis that a recall task is usually more difficult than a recognition task, when the two tasks deal with the same content and are of the same nature. Some examples[1] of literal comprehension tasks are:

1.1 Recognition or Recall of Details. The student is required to locate or identify or to call up from memory such facts as the name of characters, the time a story took place, the setting of a story, or an incident described in a story, when such facts are explicitly stated in the selection.

1.2 Recognition or Recall of Main Ideas. The student is asked to locate or identify or to produce from memory an explicit statement in or from a selection which is the main idea of a paragraph or a larger portion of the selection.

1.3 Recognition or Recall of Sequence. The student is required to locate or identify or to call up from memory the order of incidents or actions explicitly stated in the selection.

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[1]Although the examples in each of the categories are logically ordered from easy to difficult, it is recognized that such a finite hierarchy has not been validated. Therefore, the user of the Taxonomy should view the examples as some of the tasks that might be used to help students produce comprehension products that relate to the type of comprehension described in each of the four major categories of the Taxonomy.

1.4 Recognition or Recall of Comparisons. The student is requested to locate or identify or to produce from memory likenesses and differences among characters, times in history, or places that are explicitly compared by an author.

1.5 Recognition or Recall of Cause and Effect Relationships. The student in this instance may be required to locate or identify or to produce from memory reasons for certain incidents, events, or characters' actions explicitly stated in the selection.

1.6 Recognition or Recall of Character Traits. The student is requested to identify or locate or to call up from memory statements about a character which help to point up the type of person he was when such statements were made by the author of the selection.

2.0 Inference. Inferential comprehension is demonstrated by the student when he uses a synthesis of the literal content of a selection, his personal knowledge, his intuition and his imagination as a basis for conjectures or hypotheses. Conjectures or hypotheses derived in this manner may be along convergent or divergent lines, depending on the nature of the task and the reading materials involved. For example, inferential tasks related to narrative selections may permit more divergent or creative conjectures because of the open-ended possibilities provided by such writing. On the other hand, expository selections, because of their content, may call for convergent hypotheses more often than not. In either instance, students may or may not be called upon to indicate the rationale underlying their hypotheses or conjectures, although such a requirement would seem to be more appropriate for convergent rather than divergent hypotheses. Generally, then, inferential comprehension is elicited by purposes for reading, and by teachers' questions which demand thinking and imagination which are stimulated by, but go beyond, the printed page. Examples of inferential tasks related to reading are:

2.1 Inferring Supporting Details. In this instance, the student is asked to conjecture about additional facts the author might have included in the selection which would have made it more informative, interesting or appealing.

2.2 Inferring the Main Idea. The student is required to provide the main idea, general significance, theme, or moral which is not explicitly stated in the selection.

2.3 Inferring Sequence. The student, in this case, may be requested to conjecture as to what action or incident

might have taken place between two explicitly stated actions or incidents; he may be asked to hypothesize about what would happen next; or he may be asked to hypothesize about the beginning of a story if the author had not started where he did.

2.4 Inferring Comparisons. The student is required to infer likenesses and differences in characters, times, or places. Such inferential comparisons revolve around ideas such as: "here and there," "then and now," "he and he," "he and she," and "she and she."

2.5 Inferring Cause and Effect Relationships. The student is required to hypothesize about the motives of characters and their interactions with others and with time and place. He may also be required to conjecture as to what caused the author to include certain ideas, words, characterizations, and actions in this writing.

2.6 Inferring Character Traits. In this case, the student may be asked to hypothesize about the nature of characters on the basis of explicit clues presented in the selection.

2.7 Predicting Outcomes. The student is requested to read an initial portion of selection, and on the basis of this reading to conjecture about the outcome of the selection.

2.8 Inferring about Figurative Language. The student, in this instance, is asked to infer literal meanings from the author's figurative use of language.

3.0 Evaluation. Evaluation is demonstrated by a student when he makes judgments about the content of a reading selection by comparing it with external criteria, e.g., information provided by the teacher on the subject, authorities on the subject, or by accredited written sources on the subject; or with internal criteria, e.g., the reader's experiences, knowledge, or values related to the subject under consideration. In essence, evaluation requires students to make judgments about the content of their reading, judgments that have to do with its accuracy, acceptability, worth, desirability, completeness, suitability, timeliness, quality, truthfulness, or probability of occurrence. Examples of evaluation tasks related to reading are:

3.1 Judgments of Reality or Fantasy. The student is requested to determine whether incidents, events, or characters in a selection could have existed or occurred in real life on the basis of his experience.

3.2 Judgments of Fact or Opinion. In this case the student is asked to decide whether the author is presenting information

which can be supported with objective data or whether the author is attempting to sway the reader's thinking through the use of subjective content that has overtones of propaganda.

3.3 Judgments of Adequacy or Validity. Tasks of this type call for the reader to judge whether the author's treatment of a subject is accurate and complete when compared to other sources on the subject. In this instance, then, the reader is called upon to compare written sources of information with an eye toward their agreements or disagreements, their completeness or incompleteness, and their thoroughness or superficiality in dealing with a subject.

3.4 Judgments of Appropriateness. Evaluation tasks of this type require the student to determine whether certain selections or parts of selections are relevant and can contribute to resolving an issue or a problem. For example, a student may be requested to judge the part of a selection which most appropriately describes a character. Or he may be called upon to determine which references will make significant contributions to a report he is preparing.

3.5 Judgments of Worth, Desirability, or Acceptability. In this instance, the student may be requested to pass judgments on the suitability of a character's action in a particular incident or episode. Was the character right or wrong, good or bad, or somewhere in between? Tasks of this nature call for opinions based on the values the reader has acquired through his personal experiences.

4.0 Appreciation. Appreciation has to do with students' awareness of the literary techniques, forms, styles, and structures employed by authors to stimulate emotional responses in their readers. Obviously, tasks which fall into this category will require varying degrees of inference and evaluation, but their primary focus must be on heightening students' sensitivity to the ways authors achieve an emotional as well as an intellectual impact on their readers. More specifically, appreciation involves cognizance of and visceral response to: (a) the artistry involved in developing stimulating plots, themes, settings, incidents, and characters, and (b) the artistry involved in selecting and using stimulating language, in general. Examples of tasks that involve appreciation are:

4.1 Emotional Response to Plot or Theme. Tasks of this type are based on the assumption that the plot of the theme of a given selection has stimulated and sustained a feeling of fascination, excitement, curiosity, boredom, sentimentality, tenderness, love, fear, hate, happiness, cheerfulness, or

sadness. Provided this assumption is met, the students may be requested to determine what the author did in the process of developing the plot or theme that elicited a given emotional response.

4.2 Identification with Characters and Incidents. Some appreciation tasks should require students to become aware of the literary techniques and devices which prompt them to sympathize or empathize with a particular character, or to reject him, for that matter. Other tasks should require students to consider the placement, nature, and structure of events or incidents which cause them to project themselves into the action.

4.3 Reactions to the Author's Use of Language. In this instance, the student is required to recognize and respond to the author's craftsmanship as reflected in his selection of and use of words. Such tasks may deal with the connotations and denotations of selected words and the influence they have on a reader's feelings. In addition, students should at times note figures of speech, e.g., similes and metaphors, and the effect their use has on the reader.

4.4 Imagery. Tasks of this nature require the reader to recognize and react to the author's artistic ability to "paint word pictures." In other words, students should become sensitive to the techniques an author uses in order to enable them to see, smell, taste, hear, or feel things through reading.

[Barrett, Thomas C. "Taxonomy of Reading Comprehension," Reading 360 Monograph (1972). Lexington, Massachusetts, Ginn and Company. A Xerox Company.]

APPENDIX F

SAMPLE OF A TEST OF LEVELS OF READING COMPREHENSION BASED ON BARRETT'S TAXONOMY OF READING COMPREHENSION

TEST OF LEVELS OF READING COMPREHENSION

Directions

This is a test to find out how well you can answer different kinds of questions about reading passages. There are three passages in the test and each one is followed by ten questions. You will be asked to read each passage and answer the questions on a separate answer sheet. Some questions will seem very easy and others will seem hard. You may go back to the passage at any time to help you in answering the questions. Do not spend a great amount of time of any one question, but try to answer every question. If you do not know the answer, then take an educated guess.

Scoring for this test will be done by adding up the total number of questions you answer correctly. The highest possible score for each level is ten.

Place your answer on the answer sheet which has been provided. Make no marks in the test booklet.

There is no set time limit for this test, but you should try to finish all questions within about forty minutes.

Below is a short sample passage and questions. Study the sample and raise your hand if you have any questions about it.

The Peanut President

Jimmy Carter, our current president, has brought a different lifestyle to the White House in Washington, D.C. He wears blue jeans when he's not working, walks many places instead of riding in a limousine, and talks with a southern drawl. Other presidents were much more formal. Many of them took expensive vacations, had their own airplanes, and threw large White House parties. Jimmy Carter likes a simpler style and tries to keep his southern traditions alive. One of these traditions is square dancing. Because his family in Georgia were peanut farmers, some people have made jokes about the president. Even so, Jimmy Carter keeps on smiling!

1. Jimmy Carter's family comes from:

   a. Pennsylvania
   b. Washington, D.C.
   c. Georgia
   d. South Carolina

ON A SEPARATE ANSWER SHEET:

1. a. __ b. __ c. ■ d. __

2. Jimmy Carter can be described as a(n) _____ person.

   a. extravagent
   b. thrifty
   c. unhappy
   d. formal

2. a. __ b. [redacted] c. __ d. __

3. It is all right for people to make fun of Jimmy Carter and his southern traditions because he is so good-natured.

   FACT __ OPINION __ NO EFFECT __

3. FACT __ OPINION [redacted]
   NO EFFECT __

   REASON _____

Passage #1: **A Legend in Her Own Time**

The ball resembled a laser beam as it methodically landed in the left corner of the opponent's court. The yellow blur was another of Chris Evert's famous two-handed backhands. Evonne Goolagong, her opponent, raced for the ball. Even though Goolagong was known for her agile manner, the ball was an obvious winner. The score was five games for Evert and three games for Goolagong in the third and final set. Soon Chris won the match and the United States Open Tennis Championship. The year was 1975 and the 20-year-old Evert was on her way to record-breaking women's tennis titles. She won 16 of 22 tournaments entered that year, including the U.S. Open and the Virginia Slims Championship.

Christine Marie Evert was born on December 21, 1954 in Fort Lauderdale, Florida. Her father, Jimmy Evert, was a teaching professional who gave lessons at the Holiday Park public courts six blocks from the Evert home. It had been Chris' father's idea that she take up tennis in the first place. She started taking up the sport merely as a hobby with no real feeling for the game. Chris grew to enjoy hanging out at Holiday Park and continued to practice her now-famous baseline strokes day after day for four hours at a time. Although her father has said she learned more quickly than the four other Evert children, Chris never considered herself a "natural athlete."

Chris gained a reputation as a "ball machine" because her consistent baseline game often lacked the flashy style of other players. In Florida, she learned on clay courts and has won over one hundred consecutive matches on this surface. She hits the ball with great depth, and because of her keen anticipation, never seems out of position to return her opponent's shots.

Evert has also been known as the "Ice Dolly," the name of an ice cream pop sold at the Wimbledon Tennis Championships. This expression reflects the opinion of people who have observed her emotionless court style. Recently, spectators have begun to root for Chris. She has been recognized as a model of tennis perfection, cool temperament, and outstanding manners on the court.

At age eighteen, Chris decided to skip college and turned professional. She often missed the normal teenage activities enjoyed by her friends. She missed their companionship, too. Being a famous young tennis star was exciting, but often very lonely.

In 1976, Chris Evert was ranked number one in world rankings of Women's Tennis for the third consecutive year. She won 12 of 16 tournaments entered, including the U.S. Open and Wimbledon for a total of $289,165 in prize money.

Today, the "Ice Dolly" continues to play flawless tennis in her cool, reserved manner. Concentration, precision, and mental strength are the virtues of her game. She has gained the respect of tennis fans all over the world for the talent she displays and the dignity she brings to women's tennis. At age 24, Chris admits to feeling she has achieved her goals of winning all the prestigious world championships. She often has moments of thinking she cannot remain at the top much longer due to the constant mental strain. Chris also hopes to eventually marry and raise a family. If tennis ability is inherited, perhaps Chris Evert will produce a future superstar to challenge her longstanding exceptional record.

Questions for Passage #1: A Legend in Her Own Time

1. Chris Evert was taught to play tennis by her

   a. mother
   b. father
   c. brother
   d. sister

2. Chris Evert acquired the nickname "Ice Dolly" because she

   a. often had chills while playing
   b. ate ice cream at Wimbledon Tennis Championships
   c. displayed a cool attitude on court
   d. liked to play in cooler temperatures than Florida

3. Christ has won over one hundred tennis matches on the court surface of

   a. grass
   b. asphalt
   c. macadam
   d. clay

4. In returning her opponent's shot, Chris never seems out of position because she

   a. anticipates so well
   b. hits a winning ball every time
   c. is a natural athlete
   d. practices for four hours every day

5. A world champion in sports must dedicate an entire life to reach desired goals. What qualities do you think were shown by Chris Evert throughout her career which helped her to become an outstanding athlete?

6. Chris Evert turned professional after finishing high school. She often was the youngest female playing in major tournaments such

as Wimbledon and the U.S. Open. What do you think were some of the disadvantages Chris experienced because of her young age?

7. When Chris Evert first became a famous tennis player, her emotionless behavior was mistaken by the crowd for unfriendliness. Why do you think the spectators have changed their minds about the "Ice Dolly"?

Assume each statement below is true. Do not look for any relationships which might exist between the statements.

FACT - if the statement leads you to believe the ideas expressed are true.

OPINION - if the statement expresses the viewpoint of the author or others.

NO EFFECT - if you believe the statement is not related to the story topic.

In the space below each answer on your answer sheet, write a short statement giving the reason(s) why you marked the answer you did.

8. Chris Evert could have have become a world champion tennis star if her father hadn't pushed her to practice.

FACT _____ OPINION _____ NO EFFECT _____

9. When Chris turned professional at age eighteen, she became a famous young tennis star, but missed many activities enjoyed by most teenagers in college.

FACT _____ OPINION _____ NO EFFECT _____

10. Since Chris Evert has won all the major women's tennis championships, she should drop out of some of the big tournaments so that other young potential stars might have a better chance of winning some titles.

FACT _____ OPINION _____ NO EFFECT _____

ANSWER SHEET

Passage #1:

A Legend in Her Own Time

NAME _____

DATE _____

GRADE _____

1. a. ___ b. ___ c. ___ d. ___

2. a. ___ b. ___ c. ___ d. ___

3. a. ___ b. ___ c. ___ d. ___

4. a. ___ b. ___ c. ___ d. ___

5. _____
_____
_____

6. _____
_____
_____

7. _____
_____
_____

8. FACT ___ OPINION ___ NO EFFECT ___

REASON _____
_____
_____

9. FACT ___ OPINION ___ NO EFFECT ___

REASON _____
_____
_____

10. FACT ___ OPINION ___ NO EFFECT ___

REASON _____
_____
_____

Passage #2: Homes of the Future--Now!

Have you ever wondered what the world would be like without cars or machinery? Can you imagine a world without electricity for heating and lighting? Americans may have to face this reality if our energy supplies run out in the near future.

President Carter has called attention to the energy crisis in our country. He has asked everyone's support in conserving our energy sources. In the last decade, scientists have been exploring the use of solar energy to replace energy supplies of oil and natural gas which are decreasing very fast. Solar energy, which is energy from the sun, can be used to generate electricity but commercial methods will not be available for many years. However, using solar energy to heat homes and buildings can help people to conserve energy right now.

Experiments in the 1940's proved that solar energy could be used for heating homes, but the expenses were much higher than traditional forms such as oil, gas, and electric. Today, with energy costs continuing to rise, more people are considering solar heating of homes for the following reasons: solar energy systems are nonpolluting; solar energy does not violate principles of ecology; and the sun's power is ever-present. Solar heating systems in homes would provide long-term savings on fuel costs. After six or seven years, there would be little, if any fuel bills to pay. Homes would also have higher resale values as traditional energy prices increase.

Depending on a specific location, approximately 55 percent of the energy needed within a home would be used for space heating, and about 15 percent for water-heating. In a solar energy system, radiation is taken in by a collector, placed in storage, with or without the help of a transfer device and distributed to the living space. Each operation is monitored by automatic or manual controls. There is also an auxiliary heater which provides backup for times when the solar system is not working.

There are two basic types of solar heating systems: active and passive. Active systems consist of liquid and air systems. Pumps and pipes are used to transport heat from the collectors to storage and from storage to the living space. Passive systems use the wall of the house or another woall to collect and store the heat. Movable wall flaps are used to direct the heat into the living space. An additional method involves the collection and storage of heat in water bags on the roof. Active systems are useful in existing homes where remodeling is taking place, and passive systems are helpful in designing new homes whose main use is space heating.

To install a solar energy system, insulation, weather stripping, and storm windows and doors would have to be added to a home. Solar collectors can be placed on a roof, in the back yard, or connected to a wall. Heat can be distributed through a forced air duct system which

allows warm air to circulate, or it may flow through radiators with water being preheated by solar and raised to the high temperature desired by the back-up system. The auxiliary heater takes over when the storage heat is all used up. This might occur if there are cloudy or cold days in a row.

Many people question the cost of solar heating compared to traditional energy forms. In 1976, combination solar heating and hot water systems for single family homes cost between $5,000 to $19,000. Some people are against solar energy because if other fuels aren't used, many workers could lose their jobs. Supporters of solar energy point out that because the sun is a renewable source, more jobs will be created to keep people employed.

In the future, sunny days will mean more than a sign to head for the beach! The sun could answer our home and water-heating problems forever!

Questions for Passage #2: Homes of the Future--Now!

1. In a solar energy system, radiation is taken in by a(n)

   a. auxiliary heater
   b. storage unit
   c. transfer device
   d. collector

2. People can begin to conserve energy right now by using solar energy for

   a. lighting
   b. heating homes and buildings
   c. generating electricity
   d. commercial uses

3. If there are cloudy or cold days which occur in a row, the _____ takes over when the storage heat has been used up.

   a. active system
   b. passive system
   c. auxiliary heater
   d. solar collectors

4. President Carter has called attention to the energy crisis in our country. He has asked the American people to conserve energy and support the use of new energy resources. Why do you think the energy crisis has become such an important issue?

5. If a person invested in a solar energy system for a home right now, the house would have a higher value if it would be sold in the future. Why would this happen?

6. You have read about the two basic solar heating systems: active and passive. Compare the way each system is put into a home. Explain which one you would choose if you are remodeling your present house, and give a reason for your choice.

7. To install a solar energy system, many homes will have to add certain features such as insulation, weather stripping and storm windows and doors. Solar collectors will also be a necessity. If the cost of these additions is too high, people will not want to convert to solar heat. What do you think scientists should strive for in designing practical solar heating systems?

Assume each statement below is true. Do not consider any relationship which might exist between the statements.

FACT - if the statement leads you to believe the ideas expressed are true.

OPINION - if the statement expresses the viewpoint of the author.

NO EFFECT - if you believe the statement has no relevance to the story topic.

In the space below each statement, write a brief statement giving reason(s) why you marked the answer you did.

8. Some people are considering solar heating for their homes because solar energy does not violate principles of ecology. It is more important to protect the environment than to develop less expensive heating systems which pollute the air.

FACT _____ OPINION _____ NO EFFECT _____

9. The use of solar energy in the future may mean that people who work with other energy sources would lose their jobs. But, the energy crisis is more important than unemployment.

FACT _____ OPINION _____ NO EFFECT _____

10. Paying a large amount of money for a solar-heated home is a good investment because after six or seven years, the cost of heating will be very small from then on.

FACT _____ OPINION _____ NO EFFECT _____

ANSWER SHEET

Passage #2:

Homes of the Future--Now!

NAME _____

DATE _____

GRADE _____

1. a. __ b. __ c. __ d. __

2. a. __ b. __ c. __ d. __

3. a. __ b. __ c. __ d. __

4. _____

5. _____

6. _____

7. _____

8. FACT __ OPINION __ NO EFFECT __

REASON _____

9. FACT __ OPINION __ NO EFFECT __

REASON _____

10. FACT __ OPINION __ NO EFFECT __

REASON _____

Passage #3: With Liberty and Justice for All

One of the hottest news items of the 1970's has been the struggle to pass the ERA. "ERA" stands for the Equal Rights Amendment and has been one of the goals of the women's rights movement. Recently we have heard about women's unequal jobs and pay, but the fight for equal rights began back in 1921 by the National Women's Party (NWP). This group wanted men and women to have equality and set out to change federal and state laws and the federal constitution. In 1923, the NWP suggested the ERA at the Seneca Falls Convention and later that year, Republican Senator Charles Curtis and Representative Daniel Anthony introduced the Amendment into Congress.

In the beginning of the struggle, women's groups agreed on the same goal, but today this is not so. Phyllis Schlafly's STOP ERA is made up of women who are trying to stop the passage of the ERA Amendment in many of the states. In the 1920's, some women were against the ERA because of the protective labor laws. At this time in history, men joined unions to better their working conditions, but women could not join. Protective laws were a way of making sure things were not unfair to women. Women who worked saw the ERA as a threat to being protected because there would be no special laws for them under this amendment. The National Women's Party was against special laws for women and became divided in their goal for equal rights.

In the 1930's and 1940's, the depression and war made people pay more attention to democracy and equal rights for women. During the 1940's, many organizations, including the Democratic and Republican parties gave their support for the ERA. By 1960, the Senate passed the ERA with an amendment which kept the state protective laws for women. The civil rights and feminist groups also brought new interest to the ERA.

The National Organization for Women (NOW) was formed in 1965. NOW wanted the Senate to hold hearings on the ERA in 1970. On October 12, 1971, the House Judiciary Committee of Congress passed the ERA with no amendments. Because women's groups had become more united, the ERA was on its way to being approved by 3/4 of the states. If the ERA is to become an amendment to the constitution, 38 of 50 states must approve it. If it is federal law, all the states must change their laws to include the ERA, and some states don't want this to happen.

In 1975, only four of the 38 states were left to approve the ERA. By March, 1979, all 38 states must have approved the ERA or it will die in Congress. Today there is a bill in Congress to extend the ERA deadline to March, 1986. Liz Carpenter, co-chairperson of ERAmerica, a support group, believes the extension is necessary for the ERA to survivie.

When deciding if you are for or against the ERA, you must think about your true feelings about equal rights for men and women.

Besides the special labor laws, a husband's duty to support the family, a women's military draft, and lower insurance rates are some other things to think about. The ERA will give our country an equal rights definition and make it illegal for states to be unfair to someone because of gender. All federal and state laws will have to agree to the principle of equal rights for all. It will mean more than changing the word "he" to "he/she." Only time will tell if Americans are ready to see men and women as real "equals" and accept the challenge ERA will bring.

Questions for Passage #3: <u>With Liberty and Justice for All</u>

1. The struggle for equal rights for men and women began in

   a. 1921
   b. 1930
   c. 1940
   d. 1975

2. The co-chairperson for an ERA support group called ERAmerica is

   a. Charles Curtin
   b. Daniel Anthony
   c Liz Carpenter
   d. Phyllis Schlafly

3. In order for the ERA to become an amendment to the federal constitution, _____ of the 50 states must approve it.

   a. 2/3
   b. 3/4
   c. 1/2
   d. all

4. Since 1920, women's groups have been working to have the ERA approved in 38 of 50 states. It has not been an easy goal to achieve. Why do you think the ERA has not been quickly accepted by everyone?

5. Between 1930 and 1970, many happenings such as the depression, wars, and civil rights demonstrations made Americans pay more attention to democracy. Why do you think the ERA gained much more support during this time period?

6. In 1970, the National Organization of Women pressured Congress to hold hearings on the ERA. What effect did they have on the federal lawmakers?

Assume each statement below is true. Do not look for any relationships which might exist between the statements.

FACT - if the statement leads you to believe the ideas expressed are true.

OPINION - if the statement expresses the viewpoint of the author or others.

NO EFFECT - if you believe the statement is not related to the story topic.

In the space below each answer on your answer sheet, write a short statement giving the reason(s) why you marked the answer you did.

7. The ERA has taken a long time to be approved because all people do not agree that women and men should work in the same jobs and under the same conditions.

   FACT _____ OPINION _____ NO EFFECT _____

8. If the ERA is passed, women will lose some of the privileges (such as being paid support money by the husband after a divorce) they now have. However, it is better to have equal rights and equal pay for women.

   FACT _____ OPINION _____ NO EFFECT _____

9. In the 1920's, women were not allowed to join labor unions. This could happen today if women's groups such as the National Organization of Women didn't stop it.

   FACT _____ OPINION _____ NO EFFECT _____

10. If the ERA becomes a federal law, all states whose laws do not include equal rights will be going against the United States Constitution. For this reason, the ERA is not a good idea because it will weaken the power of the states to make their own decisions.

    FACT _____ OPINION _____ NO EFFECT _____

ANSWER SHEET

Passage #3:

With Liberty and Justice for All

NAME _____

DATE _____

GRADE _____

1. a. ___ b. ___ c. ___ d. ___

2. a. ___ b. ___ c. ___ d. ___

3. a. ___ b. ___ c. ___ d. ___

4. _____

5. _____

6. _____

7. FACT ___ OPINION ___ NO EFFECT ___

REASON _____

8. FACT ___ OPINION ___ NO EFFECT ___

REASON _____

9. FACT ___ OPINION ___ NO EFFECT ___

REASON _____

10. FACT ___ OPINION ___ NO EFFECT ___

REASON _____

APPENDIX G

INSTRUCTIONS AND SAMPLE VALIDATION SHEET FOR A TEST OF LEVELS OF READING COMPREHENSION BASED ON BARRETT'S TAXONOMY OF READING COMPREHENSION

From: Beth Anne Valentino

To: Validators of Instrument

Date: June 23, 1978

Re: A Test of Levels of Reading Comprehension Based on Barrett's Taxonomy

This instrument has been designed as one of three measures to be used in my doctoral study entitled "An Investigation of the Relationship Between Preadolescents' Levels of Reading Comprehension as Defined by Barrett's Taxonomy and Their Existing Levels of Moral Development as Defined by Kohlberg's Stages of Moral Development."

I have written three passages dealing with the content areas of Physical Education, Science, and Social Studies. Each passage is followed by ten comprehension questions. A total of ten questions at each of the comprehension levels used (Literal, Inferential, and Evaluation) is included in the test. My purpose is to find out at which level of comprehension the student is able to function. Once designated, these levels will be correlated with levels of moral development to investigate any possible relationships which might exist.

The instrument will be administered to students identified as preadolescents who are at the seventh- and eighth-grade levels in school. An N of approximately 100 students will be used.

In order for me to be sure that the instrument measures the levels of reading comprehension I am interested in, indicate the reading comprehension level of each question by placing a checkmark in the appropriate box beneath the question number. In addition, please rate the question with a value from 0-5 (1 is low; 5 is high) in the boxes to indicate how well the question measures the specific level and offer any comments you feel would help in the improvement of the instrument. An explanation of each level and question types within the levels is included in the sheets marked Taxonomy of Reading Comprehension (Barrett, 1972).

Please return completed materials to me by Wednesday, June 28, 1978. (Or Friday, June 30, 1978, at the latest.) Thank you for your time and efforts. They are most appreciated!

VALIDATION SHEET

RATER NO. _____

Please Check (✓)

Question Level and Types	Passage #1										Passage #2										Passage #3										COMMENTS
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	
LITERAL																															
1.1 Details																															
1.2 Main Idea																															
1.3 Sequence																															
1.4 Comparisons																															
1.5 Cause-Effect																															
1.6 Character Traits																															
INFERENTIAL																															
2.1 Supporting Details																															
2.2 Main Idea																															
2.3 Sequence																															
2.4 Comparisons																															
2.5 Cause-Effect																															
2.6 Character Traits																															
2.7 Predicting Outcomes																															
2.8 Figurative Language																															

VALIDATION SHEET continued RATER NO. _____

Please Check (✓)

Question Level and Types	Passage #1										Passage #2										Passage #3										COMMENTS
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	
EVALUATION																															
3.1 Reality or Fantasy																															
3.2 Fact or Opinion																															
3.3 Adequacy or Validity																															
3.4 Appropriateness																															
3.5 Worth, Desirability, Acceptability																															
RATING																															
0																															
1																															
2																															
3																															
4																															
5																															

APPENDIX H

VALIDATION MATRIX FOR A TEST OF LEVELS OF READING COMPREHENSION BASED ON BARRETT'S TAXONOMY OF READING COMPREHENSION

QUESTION BY RATER MATRIX

RATER	1	2	3	4	5	
QUESTION Passage #1						QUESTION MEAN
1	5	3	5	5	5	4.6
2	4	3	4	5	5	4.2
3	3	3	5	5	5	4.2
4	3	4	4	5	5	4.2
5	3	4	5	5	5	4.4
6	3	4	5	2	5	3.8
7	1	4	5	5	5	4.0
8	2	4	4	5	5	4.0
9	3	4	4	5	5	4.2
10	2	4	4	5	5	4.0
Passage #2						
1	5	3	5	5	5	4.6
2	4	3	5	4	5	4.2
3	3	2	5	5	5	4.0
4	3	2	4	2	5	3.2
5	2	3	5	5	5	4.0
6	3	4	4	5	5	4.2
7	4	4	5	4	5	4.4
8	2	3	4	5	5	3.8
9	4	4	4	5	5	4.4
10	2	4	4	4	5	3.8
Passage #3						
1	5	3	5	5	5	4.6
2	5	3	5	5	5	4.6
3	5	3	5	5	5	4.6
4	4	3	4	3	5	3.8
5	4	2	4	5	5	4.0
6	4	1	5	5	5	4.0
7	3	4	4	5	5	4.2
8	3	4	4	5	5	4.2
9	3	4	5	5	5	4.2
10	3	4	5	5	5	4.2
RATER MEAN	3.36	3.33	4.56	4.70	5.0	4.15 GRAND MEAN

APPENDIX I

SCORING SHEET FOR THE DERIVATION OF LEVELS OF A TEST OF LEVELS OF READING COMPREHENSION BASED ON BARRETT'S TAXONOMY OF READING COMPREHENSION

Subject's Code Number _____

Grade (circle) 7 8

Sex (circle) M F

Criterion = 7/10

Date Scored _____

PASSAGE # 1	PASSAGE # 2	PASSAGE # 3	LEVEL SCORE:
1. _____	1. _____	1. _____	
2. _____	2. _____	2. _____	
3. _____	3. _____	3. _____	
4. _____			/10
5. _____	4. _____	4. _____	
6. _____	5. _____	5. _____	
7. _____	6. _____	6. _____	
	7. _____		/10
8. _____	8. _____	7. _____	
9. _____	9. _____	8. _____	
10. _____	10. _____	9. _____	
		10. _____	/10

Literal = 1

Inferential = 2

Evaluative = 3

Total Test
Level Score _____

APPENDIX J

SAMPLE OF THE OTIS-LENNON MENTAL ABILITIES TEST
INTERMEDIATE FORM J

A sample of the Otis-Lennon Mental Ability Test-Intermediate Form J as it was used in this study can be located in the original thesis which has been placed on file in the Pattee Library of the Pennsylvania State University, University Park, Pennsylvania.